Remarks

The Official Action mailed October 5, 2009 rejected claims 1-28.   Applicant has

amended claims 1, 8, 13, 16-20, 22-27 and cancelled claims 14, 15 and 28.   Allowance

of the pending claims 1-13, and 16-27 is earnestly solicited.

Specification Objections

The Official Action objected to the disclosure for not including a Field of the

Invention and Summary sections.   However, Applicant would like to kindly point out that

both the MPEP and the CFR do not "require" the presence of the above identified section.

They merely indicate where in the application the section "should" be placed if Applicant

chooses to add such a section and the suggested content of the section.   For example,

37 C.F.R. §1.73 only states that a "Summary of the Invention" should or may be included.

It does not state "must" or "shall."   Accordingly, Applicant has elected not to include a

"Summary of the Invention" as this is within the discretion and right of the Applicant.

Applicant respectfully requests the objections to the specification be withdrawn in

light of the present comments and amendments.

Claim Rejections under 35 USC § 101

The Official Action rejected claims 22-28 under 35 U.S.C. 101 as being directed to

non-statutory subject matter.   Applicant has amended claims 22-27 and cancelled claim

28.

Applicant disagrees that claims 22-27 are directed to non-statutory subject matter.

In particular, Applicant disagrees that the identified embodiments such as acoustical

embodiments and other forms of propagated signal embodiments are not machine

readable mediums.   Since the rejection is based upon the allegedly intangible nature of

the claimed subject, Applicant has amended claim 22 to explicitly claim the tangible

aspects of claims 22-27.   Applicant respectfully requests that the present rejection be

withdrawn.

Claims Rejections under 35 U.S.C. § 102 (Chang)

The Office Action rejects claims 1-28 under 35 U.S.C. 102(b) as being anticipated

by Smith (US 6,437,240).   Applicant has amended claims 1, 8, 13, 16-20, 22-27 and

cancelled claims 14, 15 and 28.   Applicant respectfully requests the rejection of claims

1-13 and 16-27 be withdrawn for the following reasons.

As is well-established, in order to successfully assert a *prima facie* case of

anticipation, the Official Action must provide a single prior art document that includes

every element and limitation of the claim or claims being rejected.   Therefore, if even

one element or limitation is missing from the cited document, the Official Action has not

succeeded in making a prima facie case.

Claims 1-13 and 16-27

Claims 1-7 require performing a first code motion on a first set of one or more instructions in the program *except each memory access instruction* in the program subject to a dependence constraint of the program; and performing a second code motion on a second set of one or more instructions in the program *except each wait instruction* in the program subject to a dependence constraint of the program, to increase a number of instructions between issue and completion of the memory access instruction, *wherein the first code motion and the second code motion are in opposite directions*. Claims 8-12 require performing a first code motion on a first set of one or more instructions *except each memory access instruction* in the program subject to a dependence constraint of a program, and performing a second code motion on a second set of one or more instructions *except each wait instruction* in the program subject to a dependence constraint of a program, to increase a number of instructions between issue and completion of the memory access instruction, *wherein the first code motion and the second code motion are in opposite directions*. Claims 13, 16-21 require a code motion unit to perform a first code motion in a the program *except the memory access instruction* subject to a dependence constraint of the program and to perform a second code motion in the program *except the wait instruction* subject to a dependence constraint of the program to hide a latency of a memory access instruction in the program, *wherein the first code motion and the second code motion are in opposite directions*. Claims 22-27 require determining a

sinking candidate from one or more instructions of the program *except a memory access instruction* in the program, based on a dependence constraint of the program; *performing a code sinking* on each instruction corresponding to the sinking candidate subject to the dependence constraint; determining a hoisting candidate from one or more instructions of the program *except a wait instruction* associated with the memory access instruction, based on the dependence constraint; and *performing a code hoisting* on each instruction corresponding to the hoisting candidate subject to the dependence constraint.

The Official Action appears to rely on Chang, page 268 for a teaching of the limitations as mentioned above in the claims 1-13 and 16-27.   However, Applicant respectfully indicates that Chang section 2.3, 2.4 and 2.5 that the Official Action relies on merely appears to disclose code optimization, code scheduling algorithm and code scheduling models.   Applicant respectfully indicates that although Chang, section 2.5 appears to disclose a downward code motion and an upward code motion, Chang fails to teach performing the code motions on a set of instructions in a program *except a memory access instruction* or *except a wait instruction*.   Further, Applicant has been unable to find in Chang that a first code motion not performed on a memory access instruction has a direction that is opposite to a second code motion not performed on a wait instruction corresponding to the memory access instruction.   Applicant respectfully requests that the present rejection of claims 1-13 and 16-27 be withdrawn.

Conclusion

The foregoing is submitted as a full and complete response to the Office Action.

Applicant submits that the application is in condition for allowance. Reconsideration is

requested, and allowance of the pending claims is earnestly solicited.

Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17,

or any excess fee has been received, please charge that fee or credit the amount of

overcharge to deposit account #02-2666.   If the Examiner believes that there are any

informalities which can be corrected by an Examiner's amendment, a telephone call to

the undersigned at (503) 439-8778 is respectfully solicited.

Respectfully submitted,

Date: January 4, 2010   __/Gregory D. Caldwell/
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